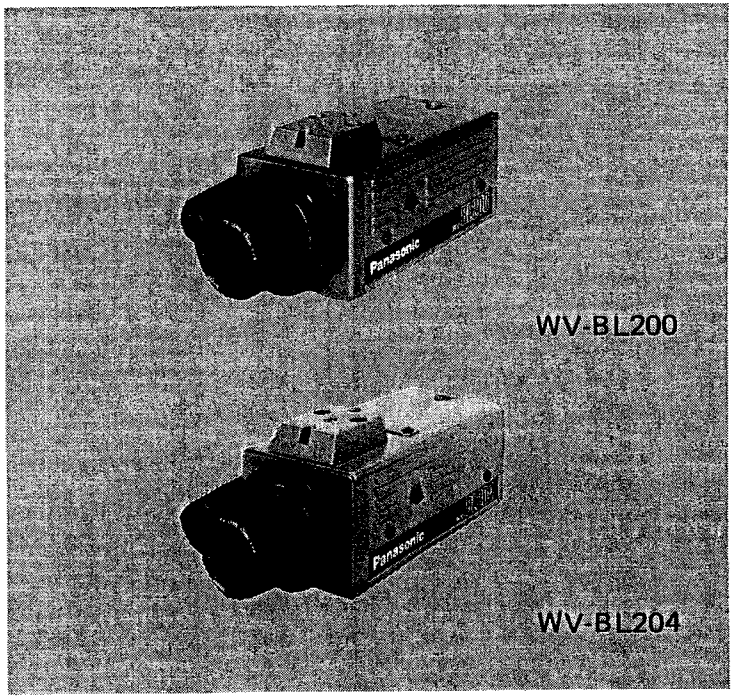
CCTV Cameras

WV-BL200/WV-BL204

Operating Instructions



ENGLISH
DEUTSCH
FRANÇAISE
中文
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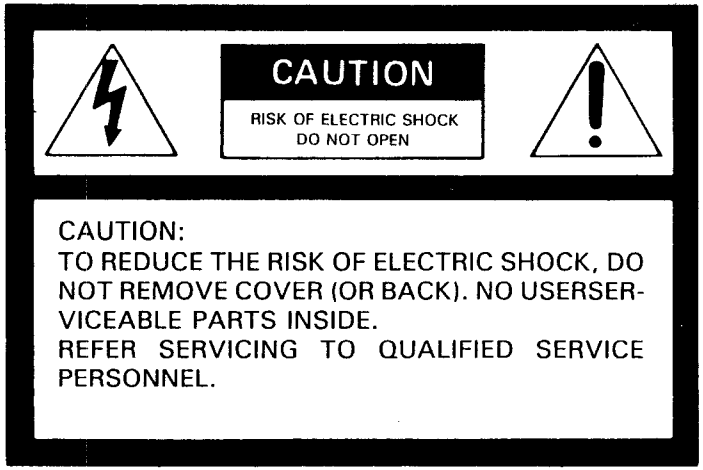
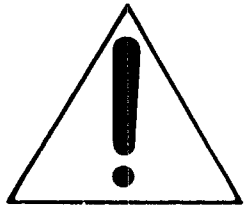
Panasonic

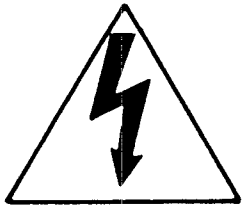
Before attempting to connect or operate this product, please read these instructions completely.

ENGLISH VERSION


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USERSERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

---------- For WV-BL200/B – For U.K. ----------

PLEASE READ FOLLOWING INSTRUCTION IF YOUR POWER SOURCE VOLTAGE IS MORE THAN 200V.

WARNING

THIS APPARATUS MUST BE EARTHED.

IMPORTANT

The wires in this mains lead are coloured in accordance with the following code.

Green and-yellow:	Earth
Blue:	Neutral
Brown:	Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug proceed as follows.

The wire which is coloured green-and-yellow must be connected to the terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.

The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.

The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

This model conforms to the EC directive (for radio interference) 82/499/EEC.

This apparatus was produced to BS 800:1983.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

ENGLISH

For WV-BL200/A — For Australia

THIS APPARATUS MUST BE EARTHED.

To ensure safe operation the three-pin plug supplied must be inserted only into a standard three-pin power point which is effectively earthed through the normal household wiring. Extension cords used with the equipment must be three-core and be correctly wired to provide connection to earth. Wrongly wired extension cords are a major cause of fatalities.

The fact that the equipment operates satisfactorily does not imply that the power point is earthed and that the installation is completely safe. For your safety, if in any doubt about the effective earthing of the power point, consult a qualified electrician.

The serial number of this product may be found on the bottom of the unit.
You should note the serial number of this unit in the space provided and retain this book as a permanent record of your purchase to aid identification in the event of theft.

Model No. _____

Serial No. _____

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PREFACE

A single CCD chip is employed in the Panasonic WV-BL200/WV-BL204 closed circuit TV camera to provide a wide array of benefits to the user.

Since the charge coupled device (CCD) image sensor eliminates bulky tubes, the camera is extremely compact and lightweight.

The CCD camera has superb resistance to burn-in, introduces no geometric distortion, is not affected by magnetic fields, has long life, and is highly resistant to damage from vibration and shock.

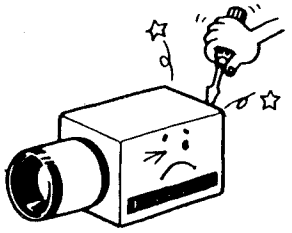
This camera has been specially designed for surveillance, security, and observation of special and dangerous locations where a compact, lightweight, highly reliable camera is needed.

FEATURES

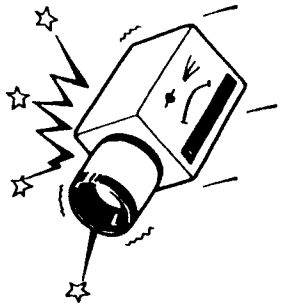
- o 1/2 inch Interline CCD image sensor with 577(H) x 581(V) pixels.
- o 420 lines of horizontal resolution.
- o 0.5 lux of minimum scene illumination at F1.4, 2856°K
- o 48 dB of signal to noise ratio.
- o Either optional standard C-mount or special C-mount (CS mount) Auto Iris Control lens can be used with.
- o Selectable internal sync (INT) or line-lock sync (LL) mode.
- o Gen-lock capability with a composite video signal (VS (Video and Sync)).
- o Selectable automatic gain control (AGC) ON (Max. gain up : approx. 12dB) or OFF.
- o Selectable Auto Iris Control signal for the lens either a video signal or DC control signal.

PRECAUTIONS

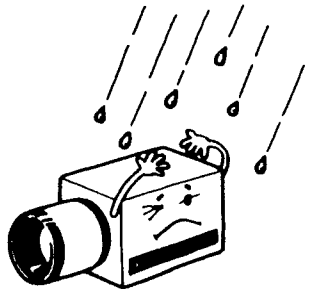
1. **Do not attempt to disassemble the camera.**
   To prevent electric shock, do not remove screws or cover. There are no user-serviceable parts inside. Refer servicing to qualified service personnel.



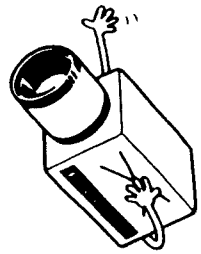
2. **Handle this camera with care.**
   Do not abuse the camera. Avoid striking, shaking it. The camera could be damaged by improper handing or storage.



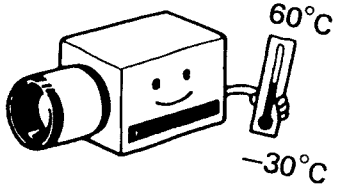
3. **Do not expose the camera to rain or moisture, avoid operation in wet areas.**
   Do take immediate action if the camera should becomes wet. Turn power off and request servicing to qualified service personnel. Moisture can damage the camera and also create the danger of electric shock.



4. **Never aim the camera at the sun.**
   Whether the camera is in use or not, never aim it at the sun or an extremely bright object as this could cause smear.

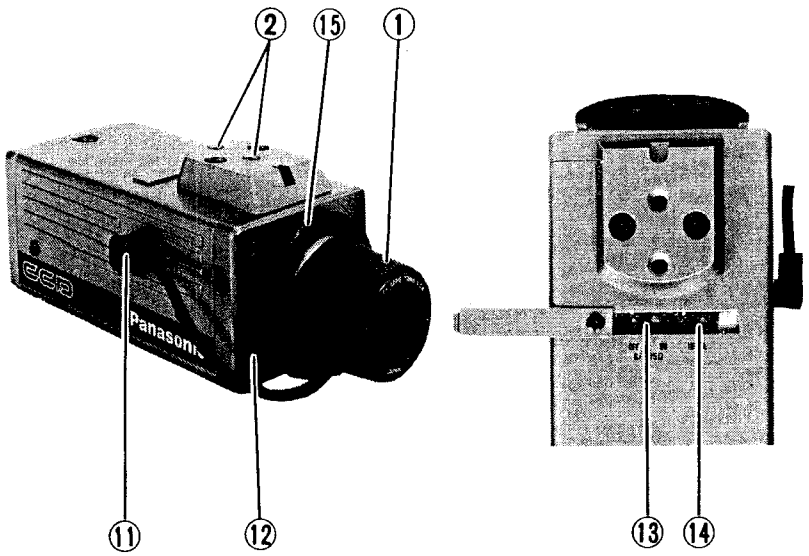


5. **Do not use the camera beyond its temperature, humidity or power source ratings.**
   (a) Designed for indoor use.
   Ambient temperature must not range beyond –30°C - +60°C.
   (b) Avoid using the camera when humidity is above 90%.
   (c) The input power source must be 240V AC 50Hz for WV-BL200/A and WV-BL200/B, 220V AC 50Hz for WV-BL200/C and WV-BL200/G or 24V AC 50Hz for WV-BL204.

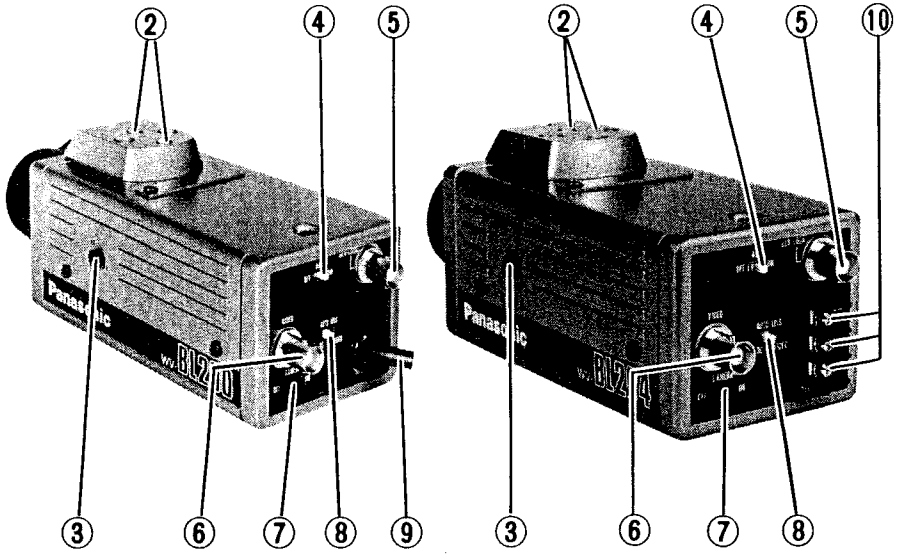


MAJOR OPERATING COMPONENTS

WV-BL200



WV-BL204



1 Automatic Iris Lens (Option)

2 Camera Mounting Screw Hole

This threaded hole (1/4" - 20) is used to mount the camera onto a mounting bracket or tripod.

3 Auto Iris Level Control (ALC LEVEL, L(low)/ H(High))

This control adjusts the control level of the auto iris control when the lens selection switch (8) is set to the DC position and the auto iris lens which requires the DC control voltage such as WV-LA12B2 etc., is mounted on the camera.

Note: Adjust this control while setting the AGC ON/OFF Switch to OFF position.

Note : When the Lens Selection Switch (8) is set to VIDEO position, the auto iris control level should be adjusted by the lens.

4 AGC ON/OFF Switch (AGC ON/OFF)

This switch is used to select the gain of the video amplifier as follows;

ON : When the lens iris is fully open at low light shooting, a clear picture is obtained by automatic increase of the gain.

OFF : A natural and low-noise picture is obtained at low light shooting.

5 Gen-lock Video Input Connector (GENLOCK)

A composite B/W or color, 1.0Vp-p/75 ohms video signal, or black burst 0.3Vp-p/75 ohms or composite sync, 4Vp-p/75 ohms should be supplied to this connector for external synchronization.

6 Video Output Connector (VIDEO)

A composite video signal is provided at this connector.

7 Camera ON/OFF Switch

8 Lens Selection Switch (AUTO IRIS, DC/VIDEO)

This switch is used to select the supplied auto iris control signal to the lens from the Auto Iris Lens Connector (11).

DC : Choose this position when the auto iris control lens requiring DC control signal such as WV-LA4.5, WV-LA6, WV-LA12, WV-LA18, WV-LA36, WV-LA6B2, WV-LA12B2 etc., is mounted on the camera.

VIDEO : Choose this position when the auto iris control lens requiring video signal such as WV-LA8B, WV-LA16B, WV-LA25B, WV-LA50B etc., is mounted on the camera.

9 Power Cord

10 AC 24V In Terminal Strip

Accepts AC 24V power source (19.5V - 28V). Be sure to connect grounding lead to the GND terminal.

Caution: To prevent fire or shock hazard, the UL listed wire VW-1, style 1007 should be used for the cable for AC 24V Input Terminal.

11 Auto Iris Lens Connector

Supplies the power and either the video signal or DC control signal to the Auto Iris Lens.
The 4-pin connector for the lens which originally has different type of connector is a standard accessory (Part No. YFE4191J100).

12 Power Indicator

13 Gen-lock Termination Switch (G/L 75ohms, ON/OFF)

When looping through the gen-lock video input signal, set this switch to OFF position and all other cases, set this to ON position.

14 SYNC Selection Switch (INT, LL)

This switch is used to select the camera synchronization mode.

INT : When no signal is supplied to the GEN-LOCK connector, the camera synchronization mode is set to internal 2:1 interlace.

Whenever the GENLOCK video signal is supplied to the GENLOCK connector, the camera synchronization mode is automatically set to external synchronization.

LL : The camera synchronization mode is set to Line-Lock even if the GENLOCK video signal is supplied to the GENLOCK connector.

Note: Set this switch to INT position for gen-lock operation.

15 Flange-back Adjusting Ring

Used to adjust the back focus or picture focus by rotating this ring to clockwise for C-mount lens or counterclockwise for special C-mount (CS mount) lens.

CAUTION: 1. Always set this ring to fully clockwise before mounting the lens.
2. Do not turn this ring too much to counterclockwise when the C-mount lens is mounted as this could damage the inner glass CCD image sensor.

CONNECTION

Power Cable

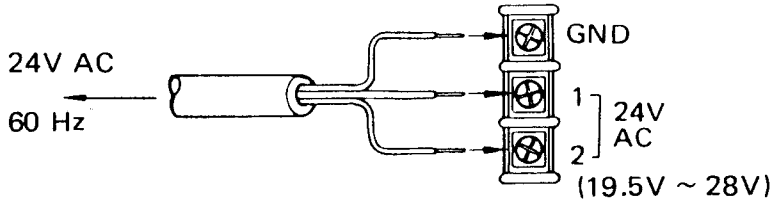
Keep the camera power switched OFF during installation.

A. WV-BL200

1. Connect the AC Power Cord (9) to a 50Hz electrical outlet 220V or 240V AC.

B. WV-BL204

1. A power supply of 24V AC 50Hz is required.
2. Connect the power cable to the 24V in Terminal Strip (10) on the rear panel of the camera.



Recommended wire guage sizes for 24V AC line.

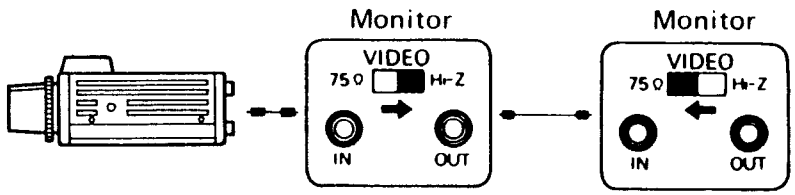
Copper wire size (AWG)	#24 (0.22mm²)	#22 (0.33mm²)	#20 (0.52mm²)	#18 (0.83mm²)
Length of Cable (Approx.) [ft]	340	550	850	1400

Caution: To prevent fire or shock hazard, the UL listed wire VW-1, style 1007 should be used for the cable for AC 24V Input Terminal.

Video Cable

1. Use a video monitor whose resolution is at least equal to the camera's.

2. Terminate the camera output with 75-ohm resistor at the furthest end of its cable run.
   A. Use 75-ohm coaxial cable. (RG-59/U, RG-6/U, RG-11/U, RG-15/U)
   B. Always set the last monitor's termination switch to 75 ohms, and set the termination switches of intermediate monitors to HIGH (Hi-Z).



   C. The maximum extensible coaxial cable length between the camera and the monitor is shown in the table 1. Since cable quality varies among manufacturers, please verify video quality before final installation, if maximum lengths are to be used.

Table 1

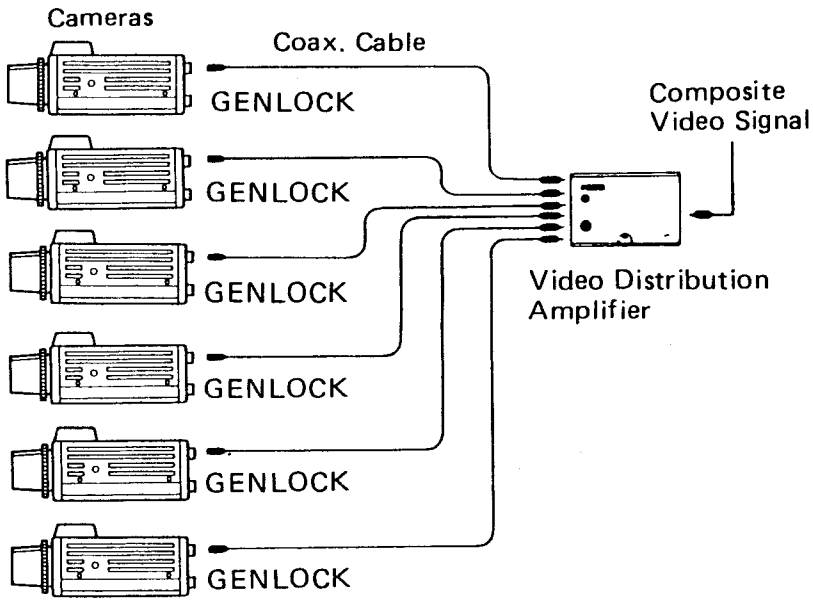
Type of coaxial cable		RG-59/U (3C-2V)	RG-6U (5C-2V)	RG-11/U (7C-2V)	RG-15/U (10C-2V)
Recommended Maximum cable length	(ft)	825	1,650	1,980	2,640
	(m)	250	500	600	800

3. Wiring precautions :

- o Do not bend coaxial cable into a curve whose radius is smaller than 10 times the cables diameter.
- o Never staple the cable - not even with circular staples. Mismatching will occur.
- o Never crush or pinch the cable.
  All these will change the impedance of the cable and cause poor picture quality.

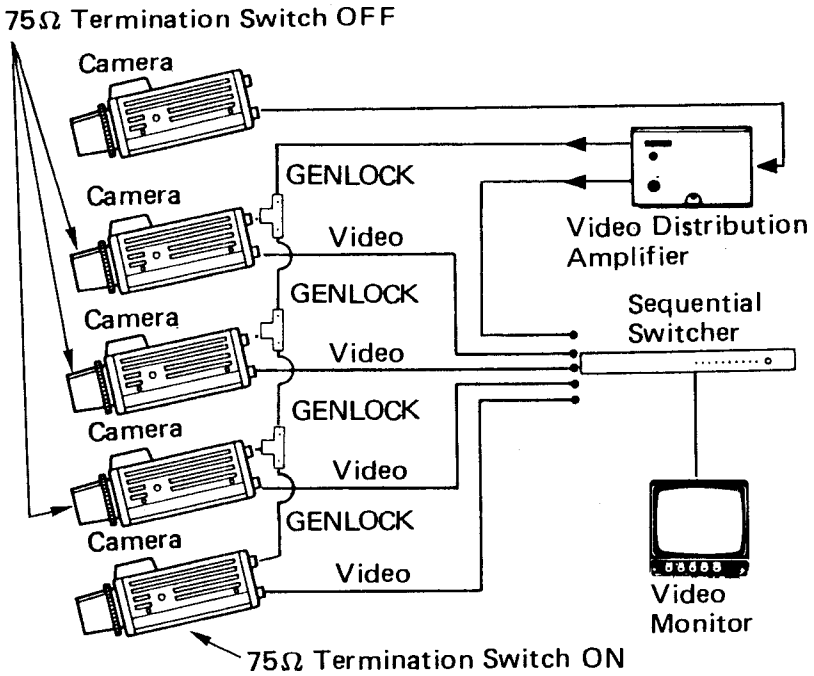
Gen-Lock Video Cable

1. Connect the coaxial cable for gen-lock video signal between the Gen-Lock Video Input connector (5) and the reference composite video output (B/W or color) (1.0Vp-p/75 ohms) or composite sync (4Vp-p/75 ohms) or black burst (0.3Vp-p/75 ohms) of the production system.



* The Gen-lock Termination Switch (13) of all cameras should be set to ON position.

o Gen-lock (Looping through)



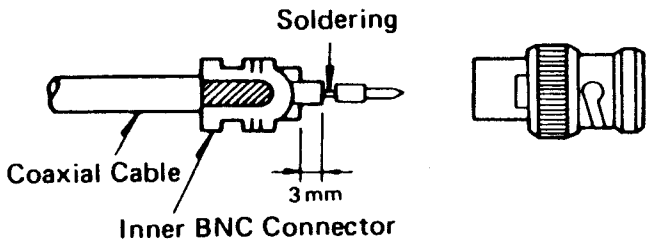
* The Gen-lock Termination Switch (13) of the furthest camera should be set to ON position and that of all other cameras should be set to OFF position.

Note : The gen-lock input signal should meet with CCIR standard and should not contain jitter such as VTR playback signal.

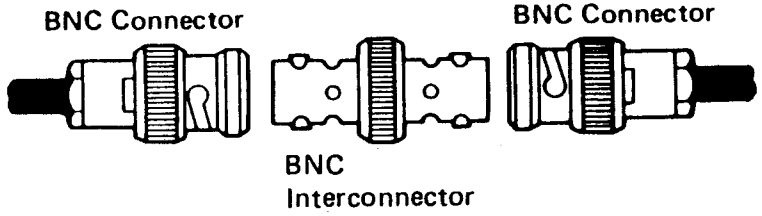
CABLE/CONNECTOR INFORMATION

These connections should be made by qualified service personnel or system installers.

■ Coaxial Cable/BNC Connector



■ Interconnection of BNC Coaxial Cable



LENSES

1. Selection of Lens

It is recommended to use the following Auto Iris Control Lens.

Specifications \ Models		WV-LA2.8 (Wide Angle)	WV-LA4.5 (Wide Angle)	WV-LA6B2 (Wide Angle)	WV-LA12B2 (Standard)	WV-LA18 (Telephoto)	WV-LA36 (Telephoto)	WV-LZ81/6 (Motorized Zoom)
Image Size		1/2" (6.4 (H) x 4.8 (V) mm)						
Focal Length		2.8 mm	4.5 mm	6 mm	12 mm	18 mm	36 mm	8.5 - 51 mm (6X)
Maximum Aperture Ratio		1 : 1.4	1 : 1.4	1 : 1.4	1 : 1.4	1 : 1.4	1 : 1.8	1 : 1.2 (Wide) 1 : 1.3 (Tele)
Angular Field of View	H	107°17'	70°6'	56°47'	30°26'	20°36'	10°13'	41°56' (Wide) 7°14' (Tele)
	V	88°4'	55°41'	43°31'	22°49'	15°22'	7°39'	31°19' (Wide) 5°28' (Tele)
Focusing Range		Adjusted by Camera	0.3 (m) - ∞	Adjusted by Camera		0.27 (m) - ∞	1 (m) - ∞	1 (m) - ∞
Mount		Special C-mount (CS mount, 1" - 32UN)						
Optional Filter Size		None	φ 37.5 mm P = 0.5	None	None	φ 37.5 mm P = 0.5	φ 37.5 mm P = 0.5	φ 49 mm P = 0.75
Dimensions		φ 43x34mm	φ43x41mm	φ43x36mm	φ43x36mm	φ43x41mm	φ43x41mm	86(W)x62(H)x99(D)
Weight		65 g	80 g	50 g	40 g	70 g	80 g	420 g

* Dimensions and weight indicated are approximate.

* Specifications are subject to change without notice.

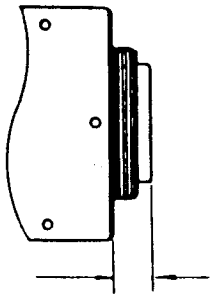
When a manual iris control lens is to be used with, the following lenses are recommended. In this case, the lighting condition should not be varied.

Specifications \ Models		WV-LM4.5 (Wide Angle)	WV-LM6B2 (Wide Angle)	WV-LM12B2 (Standard)
Image Size		1/2" (6.4 (H) x 4.8 (V) mm)		
Focal Length		4.5 mm	6 mm	12 mm
Maximum Aperture Ratio		1 : 1.4	1 : 1.4	1 : 1.4
Angular Field of View	H	70°6'	56°47'	30°26'
	V	55°41'	43°31'	22°49'
Focusing Range		Adjusted by Camera		
Mount		Special C-mount (CS mount, 1" - 32UN)		
Optional Filter Size		ϕ 37.5 mm, P = 0.5	None	None
Dimensions		ϕ 43 x 41 mm	ϕ 43 x 39 mm	ϕ 43 x 39 mm
Weight		100 g	45 g	35 g

* Dimensions and weight indicated are approximate.

* Specifications are subject to change without notice.

When you use the lens other than listed on pages 9 and 10, lens mount should be C-mount or special C-mount (CS mount (1"-32UN)) and lens weight should be less than 0.92 lbs (420g). If not, both the lens and camera should be secured.
The protrusion of the rear of the lens should be as shown below.



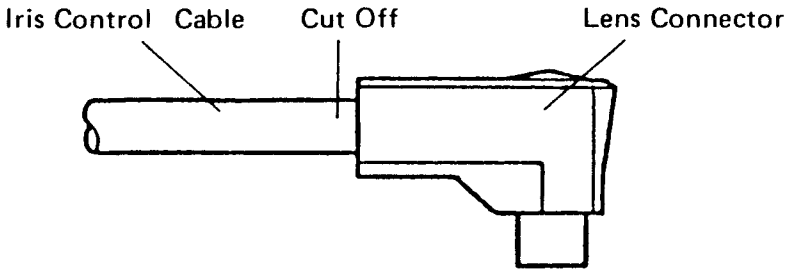
C-mount : Less than 11.5 mm
CS mount : Less than 7.2 mm

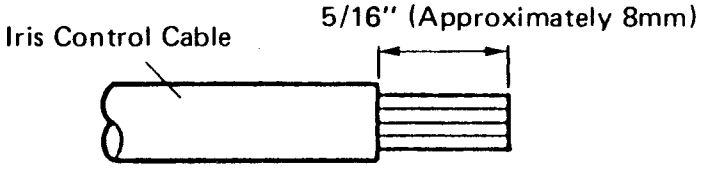
2. Installation of Auto Iris Lens Connector

When you use the Auto Iris Lens other than listed on page 9, install the lens connector (YFE4191J100) comes with the camera as follows.

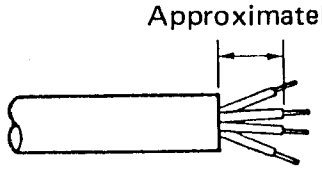
The following installation should be made by qualified service personnel or system installers.

(1) Cut off the iris control cable at the edge of lens connector and then cut off the outer cable cover as shown in the diagram.





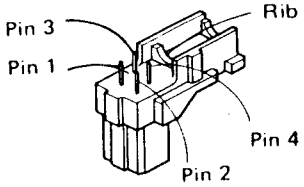
(2) Cut off the inner cable covers of the iris control cable as shown in the diagram.



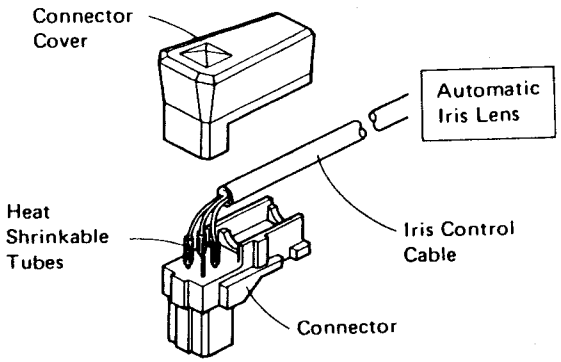
(3) Put the heat shrinkable tubes or equivalent tubes on the inner cables of the iris control cable.

(4) Solder the inner cables of the iris control cable at the pin-plug block according to the following pin assignment and cover the heat shrinkable tubes or equivalent tubes at soldered area and the heat on the tubes to shrink.

Pin 1 : Power Source : +9V DC, 50mA Max.
Pin 2 : Not used
Pin 3 : Video Signal : 0.7Vp-p/40kohms
Pin 4 : Shield, Ground
(When the Lens Selection Switch (8) is set to the VIDEO position)



(5) Both the connector cover and connector should be positioned to interlock.



Note : Cut off the rib on the connector, when the iris control cable is thick and the connector cover and connector can not locked.

3. Mounting the Lens

CAUTION: Always set the Flange-back adjusting ring to fully clockwise (C-mount side) by loosing the screw on the ring before mounting the lens as the inner glass and CCD image sensor could be damaged by the lens.

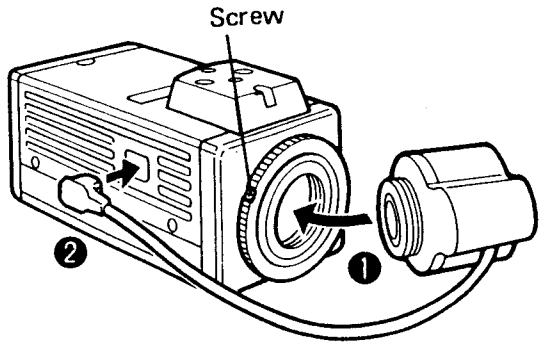
(1) Mount the lens by turning it clockwise onto the lens mount of the camera.

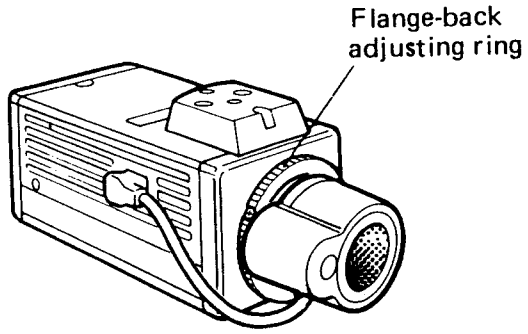
(2) Connect the lens cable to the Auto Iris Lens Connector on the camera when the Auto Iris Lens is used.

(3) Set the Lens Selection Switch (8) to the proper position as follows.

DC : The mounted lens is one of the listed on page 9 or the one which requires the DC control signal for auto iris control.

VIDEO : The mounted lens requires video signal for auto iris control.

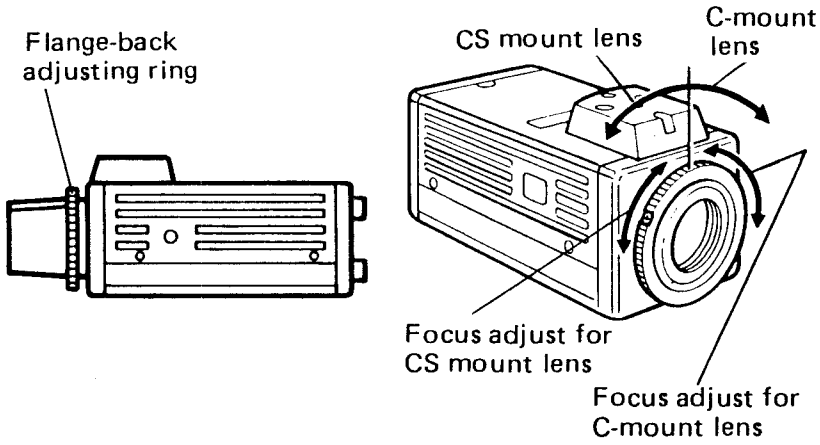




FOCUS OR FLANGE-BACK ADJUSTMENT

The following adjustment should be made by qualified service personnel or system installers.

1. Loosen the screw on the flange-back adjusting ring.



2. Turn the flange-back adjusting ring to the desired position.

   CAUTION: Do not turn this ring too much to counterclockwise as this could damage the inner glass and CCD image sensor.

3. Tighten the screw on the flange-back adjusting ring.

SETUP OF SYNC SELECTION SWITCH AND GEN-LOCK TERMINATION SWITCH

The following setup should be made by qualified service personnel or system installers.

1. Remove the one screw holding the cover of the switches and remove the cover.
2. Set the SYNC Selection Switch (INT/LL) (14) to the desired position.
3. Set the Gen-lock Termination Switch (G/L 75 ohms, ON/OFF) (13) to the desired position.
4. Reinstall the cover and secure the cover with the original screw.

PRECAUTION OF FLICKER

When the camera is aimed at objects which are illuminated by fluorescent lamp, picture may have flicker.

INSTALLATION OF CAMERA

o **Mounting at top**

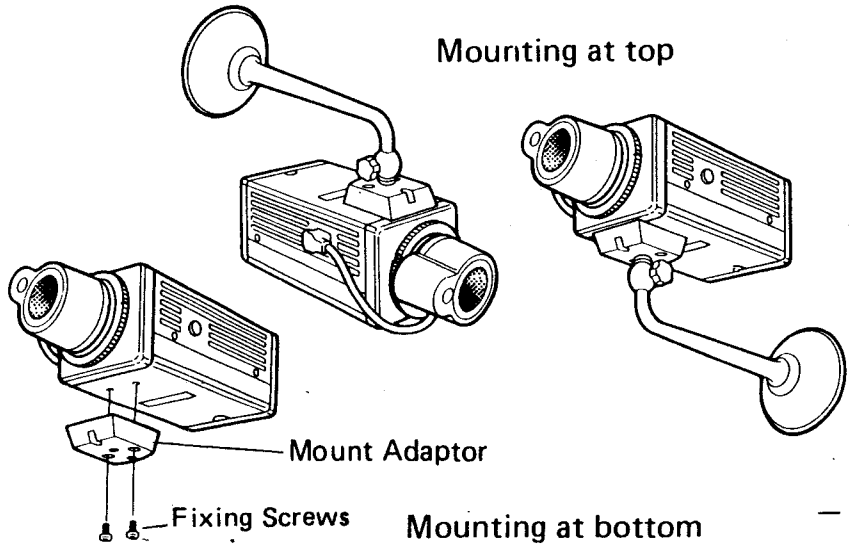
This camera is originally designed to be mounted from the top, as shown. The hole is the standard photographic pan-head screw size (1/4"-20).

o **Mounting at bottom**

Remove the mount adaptor on the top of the camera by removing two fixing screws.

Attach the mount adaptor to the bottom as shown in the diagram, then mount the camera on the mounting bracket.

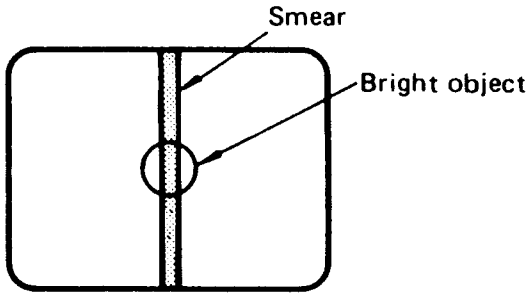
Make sure that the two original screws are used when mounting the mount adaptor; longer type screws will break the inner component.



Mounting at bottom

PREVENTION OF BLOOMING AND SMEAR

When the camera is aimed toward spot lights or other bright lights and light reflecting objects. A vertical stripe (smear) or blooming may appear therefore the camera should be operated carefully in the vicinity of extremely bright objects to avoid the vertical stripe (smear) or blooming.



EXTERNAL SYNC SIGNAL

When the camera is used with non-standard external sync, the camera synchronization may be lost. Therefore the external sync signal should be specified as CCIR standard or the like.

SPECIFICATIONS

Pick-up Device :	577(H) x 581(V) pixels, Interline Transfer CCD
Scanning Area :	6.4 (H) x 4.8 (V) mm^2 (Equivalent to scanning area of 1/2 pick-up tube)
Synchronization :	Internal or external switchable automatically at INT position Line-locked sync at LL position External Input : 1.0Vp-p/75 ohms composite video signal (GENLOCK)
Scanning System :	2:1 Interlace
Scanning ;	625 Lines/50 Fields/25 Frames
Horizontal :	15.625kHz
Vertical :	50Hz
Horizontal Resolution :	420 lines at center
Video Output :	1.0Vp-p/75 ohms Composite/BNC Connector
Signal to Noise Ratio :	48 dB (Typical)
Minimum Illumination :	0.5 lux at F1.4, 2856°K, AGC ON
Recommended Illumination :	20 lux at F1.4, 2856°K, AGC ON
Lens Mount :	C-Mount or Special C-mount (CS-mount)
Ambient Temperature :	−30°C - +60°C
Power Source :	WV-BL200/A, B: 240V AC 50Hz WV-BL200/C, G: 220V AC 50Hz WV-BL204: 24V AC 50Hz
Power Consumption :	3.5W
Dimensions (excluding lens):	70(W) x 70.5(H) x 141(D) mm
Weight (without lens) :	WV-BL200: 0.88kg WV-BL204: 0.76kg

Standard Accessories for WV-BL200/WV-BL204

o ALC Lens Connector (YFE4191J100) ..... 1 pc
o Body Cap ..... 1 pc

Weights and dimensions indicated are approximate.
Specifications are subject to change without notice.

Optional Accessories

Lens : WV-LA2.8
WV-LA4.5
WV-LA6B2
WV-LA12B2
WV-LA18
WV-LA36
WV-LZ81/6
WV-LM4.5
WV-LM6B2
WV-LM12B2